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PCT/EP2003/009750

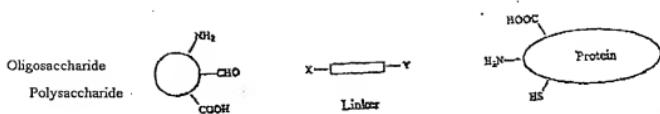
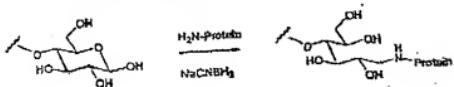
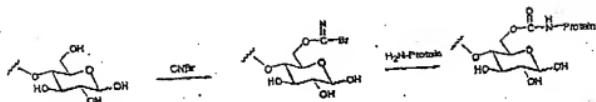


Fig. 1: Neoglycoprotein synthesis

a) Reductive amination

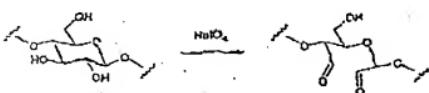
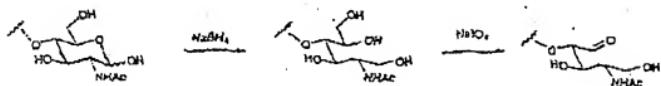
5 b) I₂ oxidation

c) CNBr activation



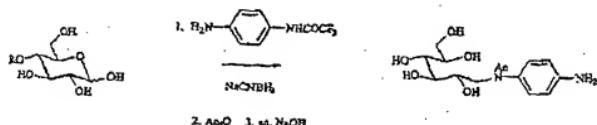
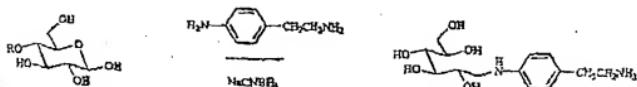
Alternative: activation with CDAP

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d) NaIO₄ cleavage

15 Fig. 2.1: Polysaccharide modification

a) Reductive amination



5. b) N-glycosylation

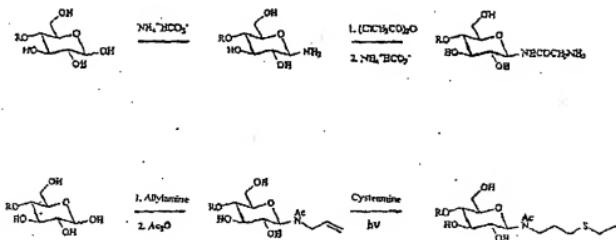
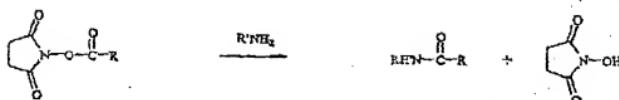
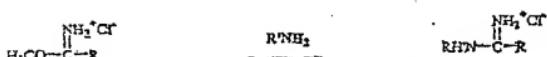


Fig. 2.2: Oligosaccharide modification

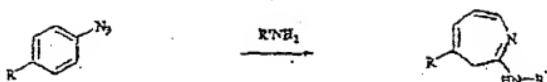
1a: N-Hydroxysuccinimides



5 1b: Imido esters



1c: Aryl azides



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2: Hydrazides

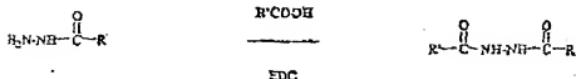
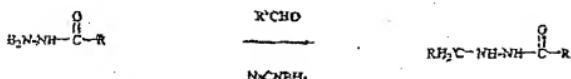
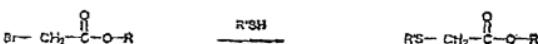


Fig. 3. 1

Fig. 3: NH₂ and CHO/COOH coupling reactions

3a: Haloacetates



5 3b: Maleimides



3c: Pyridyl disulfides



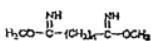
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FIG. 3.2

Fig. 3: SH coupling reactions

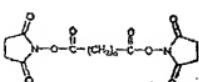
1: Homobifunctional

a)



DMA ($n = 4$)
DMP ($n = 5$)
DMS ($n = 6$)

b)



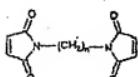
DSG ($n = 3$)
CSS ($n = 6$)

c)



ADH

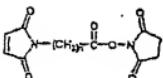
d)



SMOE ($n = 2$)
BMB ($n = 4$)
BMH ($n = 6$)

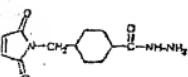
2: Heterobifunctional

a)

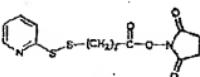


AMAS ($n = 1$)
GMBS ($n = 3$)
EMCS ($n = 5$)

b)

 $\text{M}_2\text{C}_2\text{H}$

c)

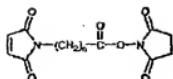


SPDP

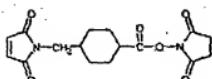
Fig. 4: Crosslinkers

1: Maleimide

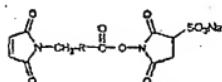
a)



AMAS ($n = 1$)
GMBS ($n = 3$)
EMCS ($n = 5$)

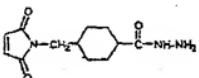


SMCC

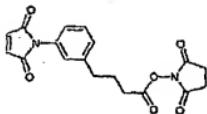


Sufio-GMBS
Sufio-EMCS
Sufio-SMCC

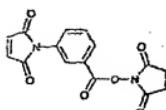
b)

M₂C₂H

c)



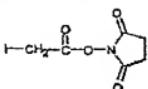
SMPB



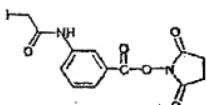
MBS

5 Fig. 5: Linkers for SH couplings

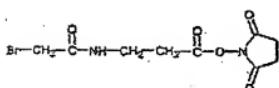
2: Haloacetate



SIA

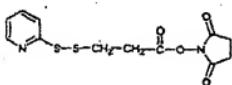


SIAB

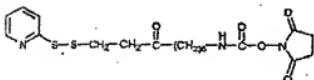


SBAP

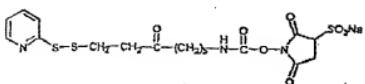
5 3: Pyridyl disulfide



SPDP



LC-SPDP



Sulfo-LC-SPDP

Fig. 5: Linkers for SH couplings